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What is Claimed is:

1. A blood vessel clip, comprising a first leg, a second leg, and a head connecting said first leg and said second leg, the proximal end of said first leg substantially crossing the proximal end of said second leg such that said first leg and said second leg lie in planes separate from the plane defined by said head; said blood vessel clip comprising spring-quality material such that said first leg and said second leg are biased toward one another and separable to an open position.

2. The blood vessel clip of claim 1, further comprising a curled member at the distal end of both the first leg and the second leg, said curled members pointing substantially into a space between said first leg and said second leg when said blood vessel clip is in said open position.

3. The blood vessel clip of claim 1, wherein the head is substantially circular.

4. The blood vessel clip of claim 1, wherein said spring-quality material is stainless steel.

5. The blood vessel clip of claim 1, wherein said spring-quality material is titanium.

6. A blood vessel clip, comprising a first leg and a second leg spaced apart from one another and a head connecting them, said head comprising spaced-apart members and said blood vessel clip comprising substantially annealed metal.

7. The blood vessel clip of claim 6, wherein said first leg, second leg and head have a substantially triangular cross section.

8. The apparatus of claim 6, wherein said first leg has a grooved first leg inner surface and said second leg has a grooved second leg inner surface substantially facing said first leg inner surface.

9. The apparatus of claim 8, wherein said first leg inner surface has grooves diagonally opposed to grooves on said second leg inner surface.

10. The blood vessel clip of claim 6, wherein said substantially annealed metal is stainless steel.

11. The blood vessel clip of claim 6, wherein said head includes a proximal end, said spaced-apart members extending from said proximal end substantially linearly outward to a maximum width, and narrowing from said maximum width substantially linearly until connecting to said first leg and said second leg.

12. The blood vessel clip of claim 6, wherein said first leg and said second leg form an angle relative to one another.

13. The blood vessel clip of claim 6, wherein the proximal end of said first leg substantially crosses the longitudinal centerline of the blood vessel clip and abuts the proximal end of said second leg, whereby said first leg and said second leg substantially prevent the blood vessel from entering the space formed within said head.

14. The blood vessel clip of claim 6, wherein said first leg has a first leg inner surface and said second leg has a second leg inner surface substantially facing said first leg inner surface, said first leg inner surface having a plurality of sawteeth each oriented at an angle opening substantially toward said head of said blood vessel clip, and said second leg inner surface having a plurality of sawteeth each oriented at an angle opening substantially toward said head of said blood vessel clip.

15. The apparatus of claim 14, wherein said sawteeth are each oriented at a substantially equal angle.

16. The apparatus of claim 6, wherein said first leg has a first leg inner surface and said second leg has a second leg inner surface facing said first leg inner surface, said first leg inner surface and said second leg inner surface each having a first section and a second section, said second section located closer to said head than said first section, said

first section of said first leg inner surface having a plurality of sawteeth each oriented at an angle relative to said first leg and said first section of said second leg inner surface having a plurality of sawteeth each oriented at an angle relative to said second leg, each said angle opening substantially toward said head of said blood vessel clip, and said second section of said first leg inner surface having a plurality of sawteeth each oriented at an angle relative to said first leg and said second section of said second leg inner surface having a plurality of sawteeth each oriented at an angle relative to said second leg, each said angle opening substantially away from said head of said blood vessel clip.

17. The apparatus of claim 16, wherein said sawteeth are each oriented at a substantially equal angle.

18. The apparatus of claim 6, wherein said head is substantially circular.

19. The apparatus of claim 18, wherein said first leg has a grooved first leg inner surface and said second leg has a grooved second leg inner surface substantially facing said first leg inner surface.

20. The apparatus of claim 19, wherein said first leg inner surface has grooves diagonally opposed to grooves on said second leg inner surface.

21. The apparatus of claim 19, wherein said grooves are substantially vertical, further comprising a keyway in said first leg inner surface, said head and said second leg inner surface, said keyway substantially located on said blood vessel clip in a plane substantially bisecting said blood vessel clip.

22. The apparatus of claim 6, wherein said first leg, said second leg and said head each have a substantially circular cross section.

23. The apparatus of claim 22, wherein said head is substantially circular.

24. The apparatus of claim 22, further comprising vertical grooves cut into said first leg and said second leg, said vertical grooves on said first leg substantially facing said vertical grooves cut into said second leg.

25. The apparatus of claim 22, wherein said first leg has a substantially planar, vertically-grooved first leg inner surface and said second leg has a substantially planar, vertically-grooved second leg inner surface substantially facing said first leg inner surface.

26. A blood vessel clip, comprising:

a head;

a first leg connected to said head, said first leg having a first mating bend extending laterally to said blood vessel clip and having an inner surface; and

a second leg connected to said head, said second leg having a second mating bend extending laterally to said blood vessel clip, said second mating bend adapted to fit substantially into said inner surface of said first mating bend when the blood vessel clip is closed.

27. A blood vessel clip, comprising:

a head;

a first leg connected to said head, said first leg having a first leg indentation running longitudinally along said first leg; and

a second leg connected to said head, said second leg having a second leg mating surface adapted to fit substantially into said first leg indentfation when the blood vessel clip is closed.

28. An apparatus for placing over a blood vessel a blood vessel clip comprising spring-quality material and having a head, comprising:

an applicator barrel having a distal end;

an exit aperture in said distal end of said applicator barrel;

a constricted region narrower than the head of the blood vessel clip, said constricted region adjacent to said exit aperture; and

means for impelling the blood vessel clip through said constricted region, whereby compression of the head as it enters said constricted region forces the blood vessel clip open.

29. The apparatus of claim 28, wherein said impelling means comprises a plunger operably connected to a grip assembly.

30. An apparatus for flattening a blood vessel, said apparatus comprising:

an applicator barrel having a distal end;

an exit aperture in said distal end of said applicator barrel;

a first pin extending distally from said applicator barrel on one side of said exit aperture; and

a second pin extending distally from said applicator barrel on substantially the opposite side of said exit aperture from said first pin.

31. The apparatus of claim 30, wherein said first pin and said second pin are substantially parallel to a centerline of said applicator barrel.

32. The apparatus of claim 30, further comprising a protective ball attached to the distal end of both said first pin and said second pin.

33. The apparatus of claim 30, further comprising a rotating knob attached to said applicator barrel substantially coaxially with said applicator barrel.

34. An apparatus for applying to a blood vessel a blood vessel clip having a wide portion, comprising:

a grip assembly having a handle and a trigger;

an applicator barrel attached to said grip assembly;

a magazine connected to said applicator barrel, said magazine having a plunger space and a magazine passage separated by a divider shim, said magazine passage adapted to hold one or more blood vessel clips;

an exit aperture in said magazine through which the blood vessel clip is ejected;

a constricted region adjacent to said exit aperture, said constricted region narrower than the wide portion of the head of the blood vessel clips; and

a plunger extending into said plunger space, said plunger operably connected to said grip assembly and adapted to impel the blood vessel clip through said constricted region and exit aperture.

35. The apparatus of claim 34, further comprising a first pin extending distally from said magazine on one side of said exit aperture and a second pin extending distally from said magazine on substantially the other side of said exit aperture.

36. The apparatus of claim 34, wherein said first pin and said second pin are substantially parallel to the axial centerline of said magazine.

37. The apparatus of claim 34, further comprising a protective ball attached to the distal end of both said first pin and said second pin.

38. The apparatus of claim 34, further comprising a rotating knob attached to said applicator barrel substantially coaxially with said applicator barrel.

39. The apparatus of claim 38, said rotating knob having an index cavity with an opening, inside which an indexing spring biases an indexing ball toward said opening, said indexing ball adapted to fit against an index mark located in said handle when said opening is positioned adjacent said indexing mark.

40. The apparatus of claim 34, further comprising a staging space between said constricted region on one end and said plunger space and said magazine passage on the other.

41. The apparatus of claim 34, further comprising:

a ratchet rod operably connected to said plunger, said ratchet rod extending into said handle;

a rear chamber in said handle into which said ratchet rod extends;

a rotating wheel attached to said handle within said rear chamber, said rotating wheel having an axis of rotation substantially coaxial with the axial centerline of said ratchet rod; and

a return spring connecting the proximal end of said ratchet rod to said rotating wheel.

42. An apparatus for applying to a blood vessel a blood vessel clip having a wide portion, comprising:

a grip assembly having a handle and a trigger;

an applicator barrel attached to said grip assembly;

a magazine connected to said applicator barrel, said magazine having a plunger space and a magazine passage separated by a divider shim, said magazine passage adapted to hold one or more blood vessel clips;

an exit aperture in said magazine through which the blood vessel clip is ejected;

a constricted region adjacent to said exit aperture, said constricted region narrower than the wide portion of the head of the blood vessel clips;

a plunger extending into said plunger space, said plunger operably connected to said grip assembly and adapted to serially impel said blood vessel clips through said constricted region and exit aperture;

a first pin extending distally from said magazine on one side of said exit aperture, substantially parallel to a centerline of said magazine;

a second pin extending distally from said magazine on substantially the other side of said exit aperture from said first pin, substantially parallel to a centerline of said magazine;

a protective ball attached to the distal end of both said first pin and said second pin;

a rotating knob attached to said applicator barrel substantially coaxially; a ratchet rod extending into said handle and operably connected to said plunger, said ratchet rod;

a rear chamber in said handle into which said ratchet rod extends; a rotating wheel attached to said handle within said rear chamber, said rotating wheel having an axis of rotation substantially coaxial with said ratchet rod; and

a return spring connecting the proximal end of said ratchet rod to said rotating wheel.

43. An apparatus for crimping a substantially annealed blood vessel clip having a head, comprising:

an applicator barrel having a distal end;

an exit aperture in said distal end of said applicator barrel;

a constricted region narrower than the head of the blood vessel clip, said constricted region adjacent to said exit aperture; and

means for impelling the blood vessel clip through said constricted region, whereby the head is deformed to clamp the blood vessel clip shut.

44. The apparatus of claim 43, where said means for impelling is a plunger operably connected to a grip assembly.

45. A method for occluding a blood vessel, comprising the steps of:

providing a blood vessel clip applicator comprising an applicator barrel having a distal end, an exit aperture in said distal end of said applicator barrel, a first pin on one side of said exit aperture and a second pin on substantially the opposite side of said exit aperture from said first pin;

pushing the distal end of said applicator barrel over the blood vessel, such that the blood vessel is caught between said first pin and said second pin;

rotating said distal end of said applicator barrel to compress a portion of the blood vessel caught between said first pin and said second pin; and

applying a blood vessel clip through the exit aperture to the compressed portion of the blood vessel.

46. The method of claim 45, wherein said blood vessel clip comprises spring-quality material and has a head connected to a first leg and a second leg; and further comprising the steps of:

providing a constricted region narrower than said head of said blood vessel clip; and

forcing said blood vessel clip through said constricted region, whereby compression of said head as it enters said constricted region forces the blood vessel clip open.

47. A method of closing a blood vessel clip, comprising the steps of:

providing a blood vessel clip comprising spring-quality metal and having a head and two legs biased toward one another and separable to an open position; and

pushing the blood vessel clip through a constricted region narrower than the widest portion of said head, whereby the constricted region compresses said head to separate the two legs from one another.

48. A method of closing a blood vessel clip, comprising the steps of:

providing a substantially annealed blood vessel clip having a head and two legs forming an angle with one another; and

pushing the blood vessel clip through a constricted region narrower than the widest portion of said head, whereby the constricted region deforms said head to close said blood vessel clip.

49. An apparatus for applying one of a plurality of blood vessel clips each having a head, the blood vessel clips located within the apparatus to a blood vessel, comprising:

a grip assembly;

an applicator barrel connected to said grip assembly;

a magazine attached to said applicator barrel;

a magazine passage defined within said magazine;

an exit aperture defined in said magazine;

a constricted region within said magazine adjacent to said exit aperture, said constricted region being narrower than the head of the blood vessel clips;

a plunger operably connected to said grip assembly and extending into said magazine passage, said plunger having a plurality of spaced protrusions; and

one or more springs biasing said plunger against blood vessel clips located in said magazine passage such that a surface of each blood vessel clip located furthest from said exit aperture is in substantial contact with one of said plurality of spaced protrusions.

50. The apparatus of claim 49, further comprising a lock mechanism within said magazine passage, said lock mechanism having a plurality of spring tabs extending from it, whereby the blood vessel clips are prevented from moving substantially rearward in said magazine passage.

51. The apparatus of claim 49, further comprising a plurality of spring tabs within said magazine passage, whereby the blood vessel clips are prevented from moving substantially rearward in said magazine passage.

52. The apparatus of claim 49, further comprising a first pin extending distally from said applicator barrel on one side of said exit aperture and a second pin extending distally from said applicator barrel on substantially the opposite side of said exit aperture from said first pin.

53. The apparatus of claim 52, further comprising a rotating knob attached to said applicator barrel substantially coaxial with said applicator barrel.

54. The apparatus of claim 53, said rotating knob having an index cavity with an opening, inside which an indexing spring biases an indexing ball toward said opening, said indexing ball adapted to fit against an index mark located in said handle when said opening is positioned adjacent said indexing mark.